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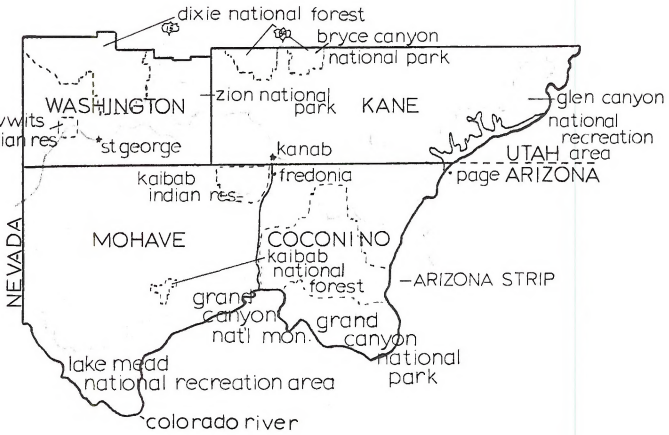
FOUR COUNTY REGION MAP[a]



a. north of the colorado river

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I. Introduction

A. Purpose

The District Economic Supplement provides an in depth analysis of the District and local economics, together with an examination of BLM resources and their impact on the various economic sectors in relation to present and projected needs. It provides the District with an economic guide to facilitate sound decision making in determining the best use of natural resources consistent with established BLM objectives.

B. Analytical Areas

The Arizona Strip District Office located in St. George, Utah administers public land in Coconino and Mohave Counties north of the Colorado River. For the purpose of this analysis, this area known as the Arizona Strip and bordered by Utah to the north will be called the Arizona Strip District Statistical Region. See map on page vi for a detailed overview.

An analysis of this region draws heavily on basic social and economic data from Kane and Washington Counties located north of the State Line in Southern Utah. Use of pertinent data from this area is necessary due to the fact that Grand and Marble Canyon chasms along the Colorado River and poor roads have served to isolate this region from important trade

and cultural center of Coconino and Mohave Counties. Thus, this area developed from the north where there were no physical barriers to penetration and subsequent colonization.

Brigham Young, the Mormon spiritual leader, sent pioneers down into Southern Utah during the 1850's and 1860's to colonize and secure the area for his church. It was natural that in time this colonization extended across the border into Arizona Strip country.

Through this early Mormon colonization, the people have developed a common cultural and religious bond which has served to make them look upon Southern Utah as the hub for most business and cultural activities. This situation holds true today inasmuch as most economic activities conducted on the Arizona Strip are channelized through Southern Utah trade centers.

Where possible basic social and economic data from Coconino and Mohave Counties are used, however, selected to avoid misleading the reader with facts that may best be pertinent to Kane and Washington Counties in presenting a more factual picture.

To adequately examine the local economic situation two community impact areas are designated. They are Kane

County including Coconino County north of the Colorado River, and Washington County, including Mohave County north of the Colorado River. These two areas are geographic units which correspond to the concept of trade areas. Each has a principal trade center where a significant proportion of business activity is conducted. They are used to measure the economic impact of BLM resources on the local economy.

St. George is the principal trade center for Washigton County. It also serves as the Washington County seat, and leading trade center for the entire four county region north of the Colorado River.

Kanab, about one-fifth the size of St. George, is the principal trade center for Kane County. It is also the County seat for Kane County.

During the past ten years, some business activity has shifted from Kanab to Page, east of the Colorado River. The sectors affected and magnitude of this shift have not been identified or measured.

Mesquite, Nevada receives a measure of economic activity from Mohave County, but again the magnitude of activity is not known, but thought to be negligible.

II. District Economy

A. Population

The Arizona Strip District Statistical Region encompasses about 7% of the total State area, and only 0.1% of the State's population. When it's population per square mile is compared to that of Coconino and Mohave Counties it is still very low. See Table I.

Table I

Population Densities 1960, 1970 and 1980 Projected [1/]

Area	Square Miles Land Area	1960	1970	1980 [2/]
Coconino Co.	18,562	2.26	2.55	4.19
Mohave Co.	13,227	.59	1.90	3.20
Statisical Region	7,969	.13	.23	.41
State	113,562	11.46	15.43	20.97

1/ Bureau of the Census.

2/ Employment Security Commission of Arizona - best projects.

The District Statistical Region gained almost 68% in population between 1960 and 1970. An 80.6% increase in population is projected through 1980. See Table II.

During the past decade, Coconino and Mohave Counties recorded significant population gains south of the Colorado River. See Table II. These increases have little bearing on this analysis and are only used for reference.

Table II

Population and Percent Distribution for

Four County Region with 1980 Projections [1/]

Area	1960	1970	Per Cent Change	1980 [3/]	Percent Population Distribution [3/] 1960 Urban	1960 Rural	1969 Urban	1969 Rural
Coconino Co.	41,857	47,355	13.1	77,750	53.5	46.5	73.8	26.2
Mohave Co.	7,736	25,110	224.6	42,300	52.3	47.7	78.4	21.6
Stat. Region	1,072	1,800	67.9	3,250	-	100.00	-	100.0
State	1,302,161	1,752,122	34.6	2,381,850	75.2	24.8	81.4	18.6
Kane Co.	2,667	2,318	-13.1	3,200 [4/]	-	100.0 [6/]	-	100.00 [7/]
Washing-Ton Co.	10,271	13,669	33.1	15,036 [5/]	49.9	50.1 [6/]	51.9 [8/]	48.1 [8/]

1/ Bureau of the Census.

2/ Unemployment Compensation Division of Arizona Security Commission.

3/ Employment Security Commission of Arizona - best projections.

4/ PRA - Planning and Research Associates 1969 - based on moderate development.

5/ Population Projections - J. Rasmussen et al 1967.

6/ U. S. Census 1960.

7/ U. S. Census 1970 projected.

8/ U. S. Census 1970.

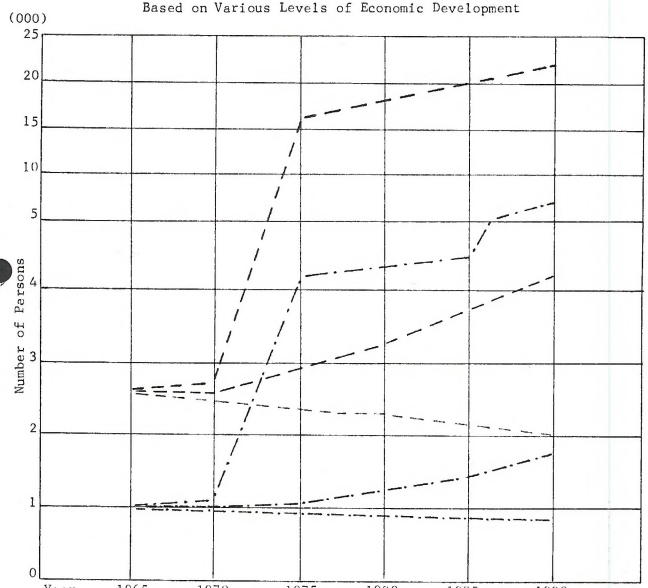
More relevant are population changes in the two community impact areas of Kane and Washington Counties. Since 1930, Kane County's population has "Seesawed" up and down alternate decades. The last, a low decade, Kane County experienced a decline of over 13% in population due in large part to a widely fluctuating employment market. The Glen Canyon Dam Project, the movie and tourist industries have all contributed to this employment situation.

Population projections through 1980 will depend on industrial development in the county. See Graph I.

Graph I

Kane County Projected Employment and Population

Based on Various Levels of Economic Development



Source: Population and Economic Base Study, Kane County, Utah PRS Planning and Research Association 1965.

If the Kaiparowits Coal Project goes, Kane County's population could grow to 18,500, by 1980. See Graph I. The University of Utah's Bureau of Economic and Business Research projects a much higher total figure of 20-25,000 population increase but assumes that approximately half of these people will live in Page, Arizona. 1/ With moderate industrial development Kane County could increase its population to 3,200 people by 1980 or a 38.1% increase over the 1970 census level. These figures represent a greater increase in population than for any decade since 1880. With no development, a small decrease of 5% in population may be realized.

With the power transmission line proposal a possible reality, bringing much needed winter employment to the area, population could grow to a limited extent some where between moderate and no development levels.

Since 1890, Washington County has slowly but steadily grown in population. It grew 33.1% over the last decade principally through an almost 40% increase of population in St. George. This increase in population compares very favorably with the State's increase of 19% over the same period.

1/ Population projections, Utah and Utah's Counties. J. J. Rasmussen et al. Bureau of Economic and Business Research, University of Utah 1967.

A 1% per year increase in population is projected through the year 2000. [2/] The population could grow to over 15,000 people based on 1970 population figures, through 1980.

Urban population has grown at a faster rate than rural. See Table II. Washington County now has a greater percentage of people living in urban communities than rural. This trend is likely to continue over the next decade due to a movement of people to the St. George area where higher salaries are paid and more services are available. Kane County and the District Statistical Region area are still classified as rural in character.

Basically population migration for both counties is not high due to the cultural and religious ties of the people. Most are willing to do most anything just to remain in the respective counties. Despite over 13% unemployment in Kane County in 1969, only 26 people migrated out. See Table III.

2/ Ibid.

Table III

Kane and Washington County Population

Migration and Estimated Natural Increase 1960 - Fiscal 1969 [1]

Year	County	Population	Natural Increases	Population Estimate Without Migration	Net Out Migration	Average Out Migration Per Year
1960	Kane	2,667	832	3,131	464	46
	Wash.	10,271	2,134	11,970	1,699	170
1965	Kane	2,600	37	2,637	37	37
	Wash.	10,500 [1]	177	10,577	77	77
1969	Kane	2,500 [2]	35 [3]	12,526	26 [3]	-
	Wash.	12,300 [2]	188 [3]	12,559	259 [3]	-

1/ Washington & Kane Co. - an economic profile (each respective). Bureau of Economic and Business Research, University of Utah 1967.

2/ Preliminary, 1969.

3/ Provisional; Bureau of Economic and Business Research, Unvi. of Utah 1969.

Careful analysis of Table IV below reveals that in Kane County, the percent of people in the 45 and older age bracket increased 4% over the past twenty years. This trend is typical for rural America as more and more young people leave for large urban-metropolitan centers where life is easier and wages are more attrative. Washington County followed over the 1950-60 period but reversed this trend during the past decade.

In studying the under 44 age groups in Washington County, only the 15-24 age bracket reflects upward gains over the 1960 level. The 25-44 age groups declined but at a decreasing rate. This seems to indicate more young people are staying and making their homes in Washington County. Two plausible reasons may account for this shift - additional educational opportunities with the expansion of Dixie College and industrial expansion in St. George.

Table IV

Percentage of Population by Broad Age Groups[1/]

	Kane County			Washington County		
Age Group	1950	1960	1970[2/]	1950	1960	1970[2/]
0 - 4	13.2	14.7	12.2	14.4	12.8	12.5
5 - 14	24.2	23.8	24.4	23.1	25.6	22.4
15 - 24	15.5	14.1	18.9	16.8	14.5	20.6
25 - 44	24.8	22.5	17.8	22.9	19.6	18.3
45 - 64	16.5	18.2	18.2	15.9	16.9	15.7
65+	5.8	6.7	8.2	6.9	10.6	10.4
Total:	100.0	100.0	100.0	100.0	100.0	100.0

Columns may not total 100 due to rounding.

1/ Washington County, Utah, an Economic Profile; Kane County, Utah, an Economic Profile - Both Univ. of Utah 1967.

2/ Population Projections, Utah and Utah Counties. J. J. Rasmussen et al, Univ. of Utah 1967.

B. Income

Personal income is the total income received by all inhabitants in a given area. Personal income considered alone for any given area has little meaning, but when its compared with previous time periods, and/or other areas, it serves as a sliding scale to economic activity for that area. Furthermore, when its components are separated, these may be individually or collectively analyzed for strength and weakness of a particular economy. Personal income takes on additional meaning when placed on a per capita basis where it operates to indicate the relative well-being of the area's inhabitants.[3/]

In 1968, Kane County per capita income was only 48.7% of that for the nation and 60.8% for the State. In Washington County, it was 53.8% of that for the nation and 67.3% for the State. See Table V, Page 15. Utah was 80.6% of that for the nation in per capita income. This is almost 7% less than in 1960. Coconino and Mohave County figures are shown in Table V for comparative and reference purposes. Per capita income figures are generally larger due to a higher level of economic

3/ Arizona State and County Personal Income Projections 1975 and 1980. Planning Division, Department of Economic Planning and Development 1970.

activity in and about Kingman and Flagstaff areas, however, they are too far removed from the District Statistical Region to be of relevance as an index.

Table V

Personal Income for Four County Region

Area	1960 [1]	1965 [1]	1968 [2]	Per Capita '60	Percent of State '65	'68
Kane Co.	$ 3,904,926	3,500,279	4,166,000	75.6	67.6	60.8
Per Capita	1464	1346	1666			
Washington Co.	12,444,903	16,982,174	21,547,000	62.6	68.4	67.3
Per Capita	1212	1598	1842			
Utah	1,724,100,000	2,342,216,233	2,884,151,000			
Per Capita	1936	2335	2739	Percent of U.S.		
U.S.	398,762,000,000	535,949,000,000	683,702,000,000	87.4	84.4	80.6
Per Capita	2215	2765	3421			
Coconino Co.	85,600,000 [3]	90,900,000 [3]	109,000,000 [3]			
Per Capita	2112	1555	1816	108.4	64.7	60.0
Mohave Co.	13,300,000	29,600,000	43,900,000			
Per Capita	1769	2110	2559	90.8	87.8	84.6
Arizona	2,456,300,000	3,780,000,000	5,044,000,000	Percent of U.S.		
Per Capita	1948	2402	3026	87.9	86.9	88.5

1/ J. Whitney Hansk, Personal Income in Utah Counties 1958-62 and 1962-66. Bureau of Economic and Business Research, Univ. of Utah 1964 & 67.

2/ Utah Department of Employment Security.

3/ 1959 instead of 1960 figure: Office of Business Economics, U.S. Deptment of Commerce.

A household consists of those who dwell under the same roof and compose a family. In 1960, Kane and Washington Counties had 3.66 persons per household, slightly more than the State average of 3.62 persons per household. Both counties show decreases from 1950 level of 3.94 and 3.86 respectively. To determine OEO income poverty thresholds, these figures are rounded to the nearest whole number of four persons per family.

The Office of Economic Opportunity considers a non-farm family of four members to be in poverty if it has an annual income of $3,600 or less.[4/] For a farm family, its $3,000.[5/] See Table VI. In Kane County, over 22% of households could be classified under the poverty level. In Washington County, it runs over 30%. In terms of actual families in poverty and receiving public assistance the number is considerably lower. This is probably due to high level of self-sufficiency of non-farm families, private assistance, and intensive case work by welfare workers. In 1968, 6.2% of Kane County's population was receiving public assistance, while at the same time only 4.6% of Washington County's population was on welfare. The State Average in 1968 was 4.2%

4/ OEO Instruction 6004-1a.

5/ Ibid.

Table VI

Disposable Personal Income 1/ Estimates for 1969, and

Percent Households by Cash Income Groups

Area	Net Dollar (000)	Percent of U.S.A.	Per House-Hold	Percent Households by Cash Income Groups 2/				
				$0-2,999	$3,000-4999	$5,000-7999	$8,000-9999	$10,000
Kane Co.	4,178	.0007	6,963	21.7	14.7	39.8	12.5	11.3
Washington Co.	21,295	.0034	6,453	30.0	20.8	28.1	9.5	11.6
Utah	2,709,315	.4327	9,323	15.9	11.7	29.8	17.2	25.4

Source: The Marketing Magazine June 10, 1970.

1/ Effective Buying Income.

2/ After taxes, excludes all non-cash items.

In 1968, total personal income in Washington County was more than five times the personal income in Kane County. See Table VII. In Kane County, Government constituted the largest sector for derived personal income rising to over 27% of all earned wages and salaries in 1968. This is a 14% increase over the 1960 level. Personal income earned from the wholesale-retail trade sectors and the service industry sector registered significant gains between 1960 and 1968 to elevate them to second and third places respectively as major sources of personal income. On the other hand, contract construction derived personal income fell disastrously during this period of time. The completion of the Glen Canyon Dam Project was primarily responsible for this decline. In conjunction with this, personal income earned from agriculture realized a significant decrease over the same reporting period. In 1960, it was the third highest source of personal income; in 1968, it was fourth. See Table VIII.

In Washington County, 4.1 million dollars or almost 20% of personal income in 1968 was earned from Government wages and salaries. Income earned from contract construction, manufacturing and wholesale-retail trades registered gains over the 1960-68 period. See Table VII.

The service industry reflected a 23% increase in dollar earned over the same period, but in terms of keeping pace with other major sectors lost 2% as a source of personal income. Agriculture did likewise, increasing dollar sales 16.9% but failing to keep pace with the growth of other sectors. See Table VIII.

Table VII

Sources of Personal Income 1960 & 1968

Source	KANE 1960 [1]	KANE 1968 [2]	WASHINGTON 1960 [1]	WASHINGTON 1968 [2]
Agriculture	$ 433,015	$ 169,947	$ 1,392,504	$ 1,627,089
Mining	7,403	5,439	25,375	44,570
Contract Constr.	761,110	69,370	426,620	1,156.016
Manufacturing	78,080	24,298	80,520	684,627
Wholesale, Retail Trade	314,550	612,276	1,826,720	3,129,412
Services	298,158	403,742	949,554	1,169,719
Government	524,608	1,101,249	2,317,730	4,130,012
Other [3]	1,488,002	1,627,128	5,425,880	8,957,257
TOTAL	$ 3,904,966	$ 4,013,449	$ 12,444,903	$ 20,898,802

1/ Kane County, Utah, Washington County, Utah, an Economic Profile (each).

2/ Personal Income in Utah Counties, J. Whitney Hanks, Bureau of Economic & Business Research, University of Utah 1970.

3/ Includes Transportation, Communications, Public Utilities, Finance, Property, etc.

Table VIII

Percent Personal Income from Major

Industry Groups 1960-68

Source	KANE		WASHINGTON	
	1960 [1]	1968 [2]	1960 [1]	1968 [2]
Agriculture	11.1	4.2	11.2	7.8
Mining	.2	.2	.2	.2
Contract Constr.	19.5	1.7	3.4	5.5
Manufacturing	2.0	.6	.7	3.3
Wholesale Retail Trade	8.1	15.3	14.7	15.0
Services	7.6	10.1	7.6	5.6
Government	13.4	27.4	18.6	19.7
Other [3]	38.1	40.5	43.6	42.9
TOTAL	100.0	100.0	100.0	100.0

1/ Kane County, Utah, Washington County, Utah, an Economic Profile (each), University of Utah 1967.

2/ Personal Income in Utah Counties, J. Whitney Hanks, Bureau of Economic & Business Research, University of Utah 1970.

3/ Includes Transportation, Communication, Public Utilities, Finance, Property, etc.

C. Employment

Employment is the most common data base used in measuring economic activity. In particular, it is often used to measure the status and growth of an areas economy, especially in a small area where detailed data is not available as would be in a national level. 6/

Between 1950 and 1960, Kane County witnessed a dramatic 44.4% decline in agricultural employment. See Table IX. In 1950, one out of three persons employed was working in agriculture, but by 1960, only one in seven persons employed in the county was working in agriculture. Since 1960, employment in the construction sector declined even more dramatically with the completion of the Glen Canyon Project. These declines have been mostly offset by increased economic activity in the wholesale-retail trades, service and manufacturing industries.

6/ An Economic Bypass Study of St. George, Utah, College and Economic and Business Research - Univ. of Utah 1955

Table IX

Percent of Total Employment in Major Industries

Industry	Kane 1950	Kane 1960	Kane Percent Change 1/	Washington 1950	Washington 1960	Washington Percent Change 1/
Agriculture 2/	33.3	15.2	- 44.4	34.2	21.0	- 34.3
Mining	.3	0.0	-100.0	1.2	2.6	+128.6
Construction	11.5	11.7	+ 23.8	8.3	7.7	- 1.2
Manufacturing	8.0	15.1	+124.6	3.8	4.6	+ 29.1
Wholesale-Retail Trade	13.6	23.2	+1115.9	16.9	21.6	+108.1
Services	20.3	26.5	+ 58.9	21.5	29.2	+ 45.3
Government	5.5	5.0	+ 10.5	6.4	5.9	- 1.1
Other	7.5	3.3	- 202.9	8.7	7.4	- 27.6
TOTAL	100.0	100.0		100.0	100.0	
TOTAL LABOR FORCE	733	902		3,048	3,332	

Source: U. S. Bureau of the Census

1/ Based on number of persons employed.

2/ Includes Forestry and Fishing.

The economy of Kane County is dependent more on export indistries than those industries that produce for local consumption. See Table X. The reason for this is that export industries attract outside dollars that potentially have a multiplier affect on the local economy that in turn will lead to increased employment and population expansion.

Lumber is the largest single source of export employment in Kane County. The largest employer in this export industry is the Kaibab Lumber Company located seven miles south of Kanab in Fredonia, Arizona. In 1970, the company employed close to 140 residents of Kane County, representing nearly one out of eight employed in the labor force.

The retail trade and service industries, have significantly grown as a percent of total employment since 1950, but are hampered to provide a steady service of employment by the seasonal nature of the tourist-recreation trade. Hence, they serve to create peak-trough conditions on the labor market during the mid-winter months and thus helps aggravate the unemployment scene. In some years, unemployment may run upwards to 45% of the labor force during these slack periods.

Table X

Economic Activities of Kane County

(1960 Employment Measure)

Economy Group	Local 2/	Export 2/	Total 1/
Agriculture, Forestry	37	92	129
Construction	9	90	99
Manufacturing	25	103	128
Furniture, Lumber and Wood Products	17	103	
Food and Kindred Products	4	0	
Printing and Publishing	4	0	
Utilities	9	0	9
Wholesale Trade	37	9	46
Retail Trade	35	116	151
Food Stores	8	2	
Eating and Drinking Places	13	50	
Other Retail Trade	14	64	
Finance, Insurance, and Real Estate	12	0	12
Services	173	51	224
Repair Business	4	0	
Entertainment and Recreation	2	2	
Hotel and Lodging	7	20	
Personal Services	48	20	
Educational Services	82	0	
Professional Services	30	9	
Public Administration	30	12	42
Total All Activities	367	473	840

1/ Source: Utah State Department of Employment.
2/ Population and Economic Base Study, Kane County, Utah. PRA - Planning and Research Associates - 1969.

Since 1952, despite a widely fluctuating labor market, the labor force in Kane County, excluding the Glen Canyon Project years, has remained relatively consistent in numbers. This labor force has average close to 1000 workers. Due to this obvious immobility of the labor force and lack of opportunities - unemployment has been high compared to the State or nation on a whole. In 1969, it was running 13.7% compared to a State average of 5%.

The future employment scene in Kane County is not clear. The proposed transmission line project may add a few people to the labor force. This could start early in 1971, drawing mostly on local unskilled labor and sub-contract work - since unionized labor teams from the metropolitan centers of Arizona, California and Utah would supply the bulk of needed skills and jobs based on a percentage of work involved in each respective state. Perhaps the Kaiparowits Coal Project offers the greatest potential for employment stabilization in Kane County. See Section under Mining.

The economy of Washington County is based primarily on farming. While agriculture has served as the basic industry its importance over the years has steadily declined. From 1950 to 1960, persons employed in

agriculture declined 34%, while employment in manufacturing, the trade and service industries increased significantly over the same period. Since 1967, economic growth, particularly in St. George and locality, has taken a decided upturn.

Between January 1, 1965 and April 15, 1969, permits for 285 dwellings, 40 commercial and industrial establishments, and 100 motel units were issued, the majority of which were issued during the last two year period reflected. [7] Employment, particulary non-agriculture, increased 44% during the 1950-65 period. In St. George alone, between April 7, 1965 and April 1968, non-agricultural payrolls increased by almost 700 people. [8] Since then, observations indicate that this pace has increased at an even more accelerated rate.

As in Kane County, Washington County is more dependent on export industries than non-export industries. See Table XI. It has an export-non-export employment ratios of 1.00 to .94. [9]

[7] Growth pattern of the St. George, Utah Area. I. Dale Despain & Associates, 1969.

[8] Ibid.

[9] An Economic Bypass Study of St. George, Utah Area. Bureau of Economic and Business Research, Univ. of Utah, 1965.

Table XI

St. George Area Total Employment and Export Oriented Employment

Classifed by Industry, 1960

	Total	Export Oriented	Percent Export is of Total	Local Service	Percent of Total Export
All Industries	1852	955	51.5	897	100.0
All Agriculture	516	358	69.4	158	37.5
All Non-Agriculture	1336	597	44.6	739	62.5
Contract Construction	66	19	28.7	47	2.0
Manufacturing	90	64	71.7	26	6.6
Transportation & Communication	83	60	72.2	23	6.3
Wholesale Trade	29	6	20.6	23	0.6
Retail Trade	459	194	42.3	265	20.4
Finance, Insurance & Real Estate	44	8	18.1	36	0.8
Services	156	90	57.7	66	9.4
Government	409	156	37.4	253	16.4

Source - Bureau of Economic and Business Research, Univ. of Utah

Future employment growth in Washington County will rest with St. George and vicinity, the principal trade area for the region. It is here that business activity and growth have centered for the past 30 to 40 years. What happens to the economy over the next decade will depend on the ability of the community to respond to new Interstate 15 Highway Bypass, the Dixie Reclamation Project, and exploitation of its unique position as gateway to Southern Utah, with its chain of State and National Parks and Monuments. See Table XII.

Table XII

Classification of Vehicles in St. George, Utah Area

Year	Ave. Daily Vehicles	Yearly Vehicles	Highway Vehicles	Service Station Stops	Eating Place Stops	Lodging Place Stops
1960	2270	830,820	560,346	256,100	149,600	74,500
1961	2340	854,100	583,626	266,700	155,800	77,600
1962	2455	896,075	625,601	285,900	167,000	73,200
1963	2830	1,032,950	762,476	348,500	203,600	101,400
1964	2935	1,074,210	803,736	367,300	214,600	106,900
1965	3155	1,151,575	881,101	402,700	235,300	117,200
1970	4529	1,653,085	1,382,611	631,900	365,200	183,900
1975	6500	2,372,500	2,102,026	960,600	561,200	279,600

Source - Utah State Dept. of Highways & Bureau of Economic & Business Research, Univ. of Utah.

The basic industry in the District Statistical Region is manufacturing. It is the single largest source of employment in the entire region. See Table XIII. This industry is largely represented by Kaibab Lumber Company located in Fredonia, Arizona. They employ about 265 people, the majority of which live in Kane County, while approximately 80 of those employed live in Fredonia. Manufacturing in Colorado City is represented by a Particle Board Plant, a Door Mill, and an Artificial Limb Plant, but total employment figures are not know. In Page, manufacturing is largely represented by Vostron Industries that employees about 28 people.

Most employment in the District Statistical Region is connected directly with export industries. Most dollars earned, although normally used to develop the local economy, flow into Utah where they are used to develop the economies of Kane and Washington Counties.

The future employment picture is not clear. It will depend largely on projected economic activity in the region. The transmission line proposal may add some new employment to the area through subcontract work or labor of an unskilled nature. The construction of thermo electric plants near Page scheduled to start in 1971 may involve upwards to

2000 workers for a short period of time. After completion, 175 permanent employees will live in or near Page. The Kaiparowits Coal Project scheduled to start in 1976, will have an enormous impact on the region creating employment for hundreds and an annual payroll in the millions. See Mining Section. Attraction of new manufacturing could provide employment for many in the area, but lack of housing and poor transportation facilities may limit this type of expansion. Last, projected tourist and recreation activity over the next decade could have an expansionary effect on employment in the service and trade sectors, however seasonal it may be.

Table XIII

Employment by Industry

Industry	Page			Fredonia		
	Total Employment	Basic Employment	% Basic	Total Employment	Basic Employment	% Basic
Mining	0	0	0	0	0	0
Constract Construction	140	126	90	0	0	0
Manufacturing	49	46	94	269	250	95
Transp. Comm. & Public Utilities	22	8	36	4	2	50
Trade	116	35	30	22	7	33
Fin., Ins., & Real Estate	9	0	0	0	0	0
Services	174	61	35	8	7	90
Government	195	147	75	49	23	47
Agriculture	0	0	0	10	9	90
	705	423	60%	362	304	84%

Source: Arizona Dept. of Economic Planning and Development.

D. Industries

1. Agriculture

Livestock is the largest single contributor to farm income in both Kane and Washington Counties. In 1964, livestock and livestock products other than poultry and dairy products accounts for almost 98% of the value of farm products sold in Kane County as compared with Washington County where livestock products accounted for nearly 40% of the value of all farm products sold. Note trend in Table XIV.

In 1964, crops accounted for 4% of all farm products sold in Kane County and 24% of all farm products sold in Washington County. Field crops were the principal crops of highest value in both counties bringing over three quarters of a million dollars income to Washington County, and only $15,836 to Kane County.

The total value of all farm products sold in Kane County amounted to $523,329 and in Washington County, $3,903,912.

Over 95% of livestock operations in Kane and Washington Counties may be classed as cow-calf operations. Since most operations are not of an economic size, the majority of operations depend on non-agricultural jobs either on a seasonal or full-time basis to supply the bulk of their family income, for without these jobs their livestock operations would not exist.

Table XIV

Value of Farm Products Sold 1959 and 1964

Area	Livestock & Livestock Products Other than Poultry and Dairy				All Crops *(See '64 breakout below)				All Farm Products	
	Amount		% of all Farm Products		Amount		% of all Farm Products			
	1959	1964	1959	1964	1959	1964	1959	1964	1959	1964
Kane	$ 831,182	510,958	99.3	97.6	$ 46,142	20,739	5.5	4.0	837,293	523,329
Washington	$2,422,496	1,554,116	48.0	39.8	$884,087	934,148	17.5	23.9	$5,052,007	3,903,912

Source: U. S. Census of Agriculture

* Value of Principal Crops 1964

Area	Field Crops	Vegetables	Fruits and Nuts	Forest Products 1/	Total Years Crops
Kane	15,836	660	3,333	910	20,739
Washington	758,092	37,463	137,212	1,381	934,148

Source: U. S. Census of Agriculture

1/ Includes horticultural and special products

Over 98% of cattle operations in the District Statistical Region are cow-calf operations. As in Kane and Washington Counties, the large majority of these operations are not economical and most operators must engage in non-agricultural jobs in the community impact areas to support these operations and/or their families. (See Table XVI.)

This is not surprising for the U. S. Department of Commerce reported negative farm earnings in both Coconino and Mohave Counties during the 1965-67 period. The credibility of these earnings is corroborated by two studies. One study conducted on costs and returns in the western cattle industry, and especially in Arizona showed returns to management and capital to be very low or negative.10/ The other, conducted on the Arizona Strip, analyzed costs and returns to capital and management in three typical ranch sizes. The smallest ranch size analyzed, a 34-animal unit operation, showed $2,756 negative returns to capital and management, the medium-size ranch, a 210-animal unit operation, returned $518, while the 337-animal unit ranch studied

10/ Economic Relationships of Grazing Fees and Permitted Use of Public Rangeland to Net Income of Western Livestock Rancher - A Regional Analysis U.S.D.A. Administrative Report, 1962.

returned $3,311 to capital and management.[11] In terms of return to fixed assets and management, the small unit returned -4.9%, the medium and larger units returned 0.3% and 1.5% respectively.[12] If a charge is made for capital at its opportunity cost in these operations, the return to capital and management must be considered negative.

TABLE XV

Ranch Income and Expense Summary, by size of ranch, Arizona Strip. BLM, Forest and Private Range

Item	Size of Ranch 34	210	CYL 337
Receipts:			
Cattle Sales	$2,092	13,166	21,819
Crop Sales			
Gov't Conservation Payments			
Total Ranch Income	$2,092	13,166	21,819
Expenses:			
Cash Costs	$1,475	5,382	10,650
Non-cash Costs	871	2,262	2,854
Total Operating Expenses	$2,346	7,644	13,504
Net Ranch Income	-254	5,522	8,315
Minus Operator Labor	2,502	5,004	5,004
Return to Capital & Management:	-2,756	518	3,311
Return to Capital & Management as a percentage of total fixed investment	-4.9%	0.3%	1.5%

Source: Organization, costs and returns for Arizona Cattle Rancher A. R. Dickerman, et al. Univ. of Ariz., 1967.

11/ Organization, Costs and Returns for Arizona Cattle Ranchers, A. R. Dickerman, et al, Univ. of Arizona, 1967.

12/ Ibid.

Table XVI

Statistical Region Livestock Operations on BLM Land

Number of Cattle [1]	Number of Operations [2]	% of Total [3]
¢00 +	6	4
500 - 599	1	1
400 - 499	5-	3
300 - 399	8	5
200 - 299	10	6
Less than 200	128	81
Total	158	100

1/ Cattle Year Long - Sheep Operations are Converted.

2/ Based on family/unit operations - many permittees share allotments but are considered separate operations.

3/ Rounded to nearest whole number.

At this juncture is may be advantageous to briefly examine the livestock industry in light of the apparent drain that is has on the total personal income of Coconino and Mohave Counties. From an economic standpoint, the above studies pointed out that ranching today is not profitable or a good investment in Arizona. Even a cursory examination of the low net returns that ranching provides in relation to high ranch prices would drive the most novice investor away. Economic reasoning would tell one that many more ranches should be up for sale when income and returns on investments are computed each year. But paradoxically few are on the market, and the typical rancher will keep his ranch regardless of price offers - he will even work outside his ranch to supplement his income and/or support his ranching operation, as a partial source of income and way of life.

In a 1970 study, economic and non-economic aspects were explored in an attempt to explain this ranching paradox. First, it may be advantageous to discuss those economic aspects, outside of beef profuction, that could add extra values to ranch resources that keep ranch prices high; and ranchers operating despite poor earnings. Many consider ranching on

a convenient tax shelter that makes it more attractive to the investor. Studies show that there is a real value to the extra product, however, this value is not enough to be considered a major output with livestock production.[13] Even for ranchers in the highest Federal Income bracket, tax savings will rarely average more than 0.5% of capital over time.[14] It would have to be closer to 5% to explain high ranch prices. Another hypothesis advanced was that value was derived from expectations of land appreciation. But here the motive is not strong. Ranchland values have not been rising appreciably except in urban areas since the early 60's while private lands have been renting at fees comparable to the capitalized value of leased land. Furthermore, it may be said that private land rentals offer no appreciation potential.[15] Thus while beef production, tax savings, and land appreciation explain a portion of the sales price of ranches, it still does not provide a complete picture. It is here we must digress from traditional economics, which has not been able to explain this paradox, and delve into "non-economic" factors that involve outputs that heretofore have not been measured by economists.

13/ The effects of Federal Income Taxes on Arizona Cattle Investments Unpublished MS Thesis Univ. of Ariz. J.L. Catz 1965.

14/ Ibid.

15/ Cattle Ranching - a business or way of life. A. Smith and W. Martin. Univ. of Arizona.

Two major categories of non-economic attitudes and values of ranchers have been classified which are related to ranch sale resistance and high ranch prices. These phenomenon are: Ranch Fundamentalism and Conspicious Consumption. [16]

Ranch Fundamentalism consists of three interrelated attitudes about rural life, land and family. [17] It is the desirability for rural life, attachment to the physical environment, and traditionally strength of of family ties through agriculture that makes ranching so worthwhile. The rancher that possesses strong ranch fundamentalism, and most do, will keep his ranch despite lower earnings because of the additional beenfits and quality of living received that he would not receive if he were not in ranching.

Conspicious Consumption assumes that a certain percent of ranchers derive a certain prestige through ranch ownership, rather than as a production unit in itself. [18]

The Conspicious Consumption effect is fairly small and is related to land speculation. It is this person who is more likely to sell if a potential buyer could be located.

16/ Ibid, Page 5.

17/ Ibid, Page 5.

18/ Ibid, Page 6.

When combined with Ranch Fundamentalism, these two would be enough to hold the market price of ranches above its value in beef production.

Thus far this examination has shown that ranching thrives today as a way of life. It is supported by the values and attitudes of ranchers who wish to preserve their way of life despite traditional economic considerations of production. At this point - it would be fair to inquire into the future of Arizona ranching. Does it have a future above the present status of the industry. First, it may be logical to look at the age of the average rancher. The median age is 59 years in Arizona. If we condider that the average life expectancy of a man today is 70 years, and younger people on ranches have little Ranch Fundamentalism, then some dramatic changes may be foreseen in the industry 10 years from now. It may be that a good number of ranchers will become available by 1980 causing prices to sag providing demand is not significantly changed.

With a good number of ranchers coming onto the market, a new demand may be created. There conceivably could be 4 types of people/organizations that may be interested in ranching. 19/

19/ Ibid.

1. Other ranchers.
2. Urban and suburban developers.
3. Government Agencies.
4. Individuals from outside the present ranching economy.

Economists are not in a position to foresee the ranching structure 10 years frm now, but it is hoped that it will undergo a metamorphosis to a point where efficiencies of management and economic considerations (possibly through corporate structures) are more important than today; to provide growth and progress in the economy and insure ranching survival.

2. Mining

Mineral production in Kane County is limited to coal, and sand and production. The value of this production is very low when compared to other major industries accounting for $32,737 income in 1965. See Table XVII below.

Table XVII

Value of Minerals Produced: Kane County

Year	Minerals Produced in County in Order of Value (Percent)	County Value	Percent of State
1960	Coal (a), Gem Stone (NA)	$ 8,082	0.00
1961	Sand & Gravel (99), Gem Stone (1)	$8,533,400	2.10
1962	Sand & Gravel (99), Gem Stone (1)	$9,124,655	2.22
1963	Sand & Gravel (98), Gem Stone (1),Coal (1)	$1,188,440	0.31
1964	Sand & Gravel (80), Coal (20)	$ 51,047	0.01
1965	Sand & Gravel (70), Coal (30)	$ 32,737	0.01

a. Combined with Iron County.

NA. Not available.

Source: Kane County, Utah, an Economic Profile, Univ. of Utah 1967

The construction of the Glen Canyon Dam and creation of Lake Powell lead utility companies to focus their attention on the Kaiparowits Plateau Region with its vast coal reserves as a likely fuel source for huge coal fired steam-electric power generating plants to be located near Lake Powell to help alleviate pressing needs and meet ever increasing demands for electric power in metropolitan areas.

Several proposals for development of these fields have been advanced by different companies and Government Agencies. The one that seems to have the best chance is Resource Company, a consortium of three utility companies that is currently studying the feasibility of following through with the initial plans to construct two 750,000 Kilowatt generating units. Eventually, construction could expand to a capacity of ten million Kilowatts.[20/]

If this project materializes it would bring enormous industrial development to Kane County. More than a billion and a half dollars would be spent on the project which would consume up to fifty million tons of coal each year or about seven times Utah's present annual coal output. [21/]

20/ "Utah's Mining Industry," Utah Mining Association Publication 1967.

21/Population and Economic Base Study, Kane County, Utah. PRA - Planning and Research Associates - 1969.

With implementation of the Kaiparowitz Project, employment directly related to the project could reach 2,500.[22/] Almost 2,100 additional jobs could be created by the impact of this direct employment.[23/] The potential economic impact on employment and annual retail sales is reflected in Table XVIII, assuming that all the employees live in a new community in Kane County.

22/ Ibid.

23/ Ibid.

Table XVIII

Potential Economic Impact of Kaiparowits Project

Employment Changes	Number of Workers
Mining and Utilities	2,500
Retail Trade	646
Construction	625
Professional & Related Services	396
Repair Services	104
Wholesale	100
Public Administration	100
Finance, Insurance, Real Estate	90
Recreation	78
Agriculture	-42
Total =	4,597

Increase in Annual Retail Sales

Grocery Store	$ 1,750,000
Eating Places	750,000
Department, Dry goods & Variety Stores	1,125,000
Clothing & Shoe Stores	625,000
Automobile Dealers	1,250,000
Gasoline Service Stations	500,000
Lumber Yards & Building Dealers	375,000
Other Stores	1,625,000
Total =	$ 8,000,000

Source: Population and Economic Base Study, Kane County, Utah. PRA - Planning and Research Associates, 1965.

The impact of this project becomes more easily understood when Table XVIII is compared with present data. A yearly payroll of 20 million dollars is expected, almost five times the present total personal income of Kane County. Retail sales would increase dramatically from the present level of under 4.5 million dollars per year to over twelve million dollars just four years after implementation of the project. With a present work force of nearly 1,000, this employment figure could exceed 4,500 workers with secondary employment considered. In summation, it is the single industry that offers the greatest possibility for stable employment and economic growth.

In Washington County, mineral production is confined primarily to sand and gravel production. Some copper and a little oil is produced. Total production in 1964 brought $644,387 in revenue. See Table XVIX below.

Table XVIX

Value of Minerals Produced: Washington County

Year	Minerals Produced in County in Order of Value (Percent)	County Value	Percent of State
1960	Copper (45), Stone (a), Sand & Gravel (NA)	$ 92,854	0.02
1961	Gemstone (NA), Sand & Gravel (NA), Copper (21), Stone (1)	$225,501	0.06
1962	Sand & Gravel (93), Copper (4), Stone (1), Other (1)	$ 99,504	0.02
1963	Sand & Gravel (94), Silver (4), Stone (1), Other (1)	$129,741	0.05
1964	Sand & Gravel (98), Copper (1), Other (1)	$644,387	0.17

NA: Not available

a: Value withheld to avoid disclosure of individual company operation.

Source: Washington County, Utah, an Economic Profile, Univ. of Utah 1967.

Oil production is of minor importance to Washington County, although from time to time it raises high speculation. There is a total of 5 wells producing about 75 barrels of oil a day.

Mineral production in Washington County over the next decade probably will not change appreciably. There will be some increase in demand for sand and gravel to develop new roads and maintain Interstate 15 Highway and provide for future building activity. The production of copper, silver, lead, oil and other minerals will not alter appreciably unless techniques are improved to a state that these minerals can be produced economically enough to compete with other areas.

Mineral production in the District Statistical Region is confined at this time to sand and gravel production. Some copper has been mined over the years in the region but present production is very low or non-existent. Uranium deposits are known to exist in limited commercial quantities but there is little activity in this area presently. Gypsum is known to exist in commercial quantity and quality but transportation costs preclude development under prevailing market conditions. Some oil exploration has been

conducted over the years, but no oil in commercial quantities has been located. There is little encouragement of large discoveries in this field.

Over the next decade, sand and gravel production will probably contribute the most value of minerals produced. Refer to the Mineral Section in the Public Land Resources Section for quantity and dollar value of minerals produced.

3. Outdoor Recreation and Tourism

Kane County rests in the hub of America's golden circle of scenic and recreation areas and Southern Utah's National Parks and Monuments that have provided unsurpassed scenic beauty and historic places of interest to hundreds of thousands of visitors each year. See Illustration 1. In addition, the county serves as the northern gateway to the North Rim of the Grand Canyon, Pipe Springs National Monument, and the Arizona Strip country. In 1969, 203,000 people visited the North Rim of the Grand Canyon, while 16,000 visited Pipe Springs National Monument.

The number of visitors to these scenic and historic areas have been increasing in recent years due in large part to intensive campaigns by Utah and Arizona to attract more visitors. See Table below and Illustration 2.

Table XX

Visitor Attendance at Kane County's

Major Attractions

(In Thousands)

Attractions	1961	1962	1963	1964	1965	1966	1967	1968
Bryce Canyon Nat'l Park	264.8	251.0	289.5	300.3	366.8	396.6	295.0*	320.8
Zion Nat'l Park	604.7	622.1	681.1	705.2	763.2	815.2	788.4	877.1
Glen Canyon National Recreation Area				196.4	303.5	359.7	390.0	645.5

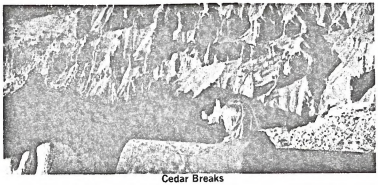
* This figure resulted from malfunctioning mechanic counter.

Source: U. S. Dept. of the Interior, National Park Service. Public Use of the National Parks, a statistic report.

Illustration 1

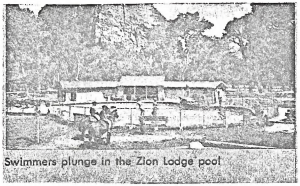
UTAH PARKS

GRAND CANYON
BRYCE CANYON
ZION and
CEDAR BREAKS



Cedar Breaks

BRYCE CANYON, land of pines and pinnacles.



Swimmers plunge in the Zion Lodge pool

Illustration 2

24 WAYS TO DISCOVER THE REAL utah!

We have a brand spanking new brochure; 50 great pages outlining two dozen exciting discovery tours. It's free and it's designed to get you off the freeway and up close to the land.

Our new booklet gets you into the back country, but keeps you close to motels, hotels, filling stations—everything!

It outlines highway systems, road conditions, seasonal events —the works!

In short, our new booklet is an outline of Utah—the one Utahns know. Interested in discovering Utah like a native?

utah!

Clip!

Quick, send me the real Utah free!

Write to
Utah Travel Council, Dept. L-11
Salt Lake City, Utah 84114

Name_____

Address_____

City _____

State _____ Zip _____

The County realizes substantial economic benefits from these visitors who come to see and enjoy Bryce and Zion National Parks, and from those travelers crossing over to America's newest playground, the Glen Canyon National Recreation Area. It realizes revenue from those crossing into Northern Arizona to view the splendor of the Grand Canyon.

The magnitude of this trade has served to create a service-oriented complex of motels, restaurants, service stations, and trailer parks not to mention those industries indirectly affected by this economic activity.

Although this business is very attractive and contributes much to the service and trade sector, it is very seasonal and does little to provide steady employment or stabilize the economy. The seasonality of this business is crystallized when one considers that owners and operators of motels and restaurants must make annual out-of-pocket expenses in three summer months year after year to remain in business. The fact that most restaurant owners close their doors during at least part of the winter is not encouraging. One only has to drive through Kanab during January or February of any given year to gain an insight into the general stillness of

of tourist business that causes unemployment to run as high as 45% of the labor force.

The future of the tourist industry may be projected with some degree of confidence, but it's total effect as a stabilizing factor on the economy is not clear. By 1985 it is projected that the demand for tourist related facilities and services in the county will be three times as great as present demand.[24/] This means that the present total number of people employed in all industries in Kane County will be needed to satisfy this demand in direct or indirect industries involved with tourism.[25/] Three factors are involved that may help Kane County meet the recreation demands of the seventies and improve their economic position from a stabilizing standpoint.

1. An improved system of access roads to meet the necessary sensitivity of travelers, accustomed to modern interstate highways and their accompanying facilities, who are becoming increasingly selective in their choice of routes.[26/] See Map 2.

2. A need for a quantity, variety and availability of accommodations to attract and hold travelers.

[24/] Population and Economic Base Study, Kane County, Utah. PRA Planning and Research Associates 1965.

[25/] Ibid.

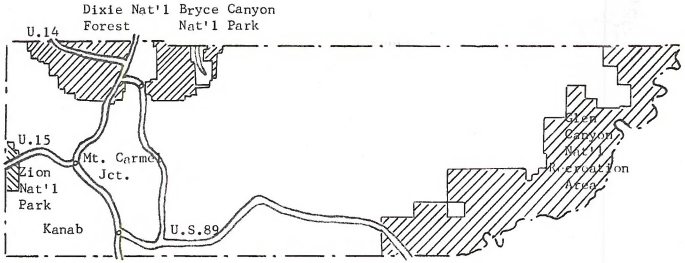
[26/] Ibid.

See following section on Utah-Recreation and Tourism. Present accommodations seem to be adequate for those travelers at Bryce and Zion Parks, but not Glen Canyon Recreation Area.[27] Highway 89 East to Glen Canyon City is virtually devoid of modern tourist accommodations and facilities.

3. This factor is probably the most critical to Kane County's future growth. It involves the stabilizing nature of tourism in Kane County. Increased tourism under present conditions may only tend to aggravate the peak-trough employment situation unless these conditions are offset by developing winter tourism (perhaps retired people) or another industry to alleviate low employment periods. A three-fold increase in tourism may only deepen unemployment during the winter months. In 1969, Kane County unemployment was highest in the State - despite multi-million revenues from tourism. If the Kaiparowits Coal and Power Transmission Line Projects go they may have a moderating influence on these conditions.

[27] Ibid.

MAP 2



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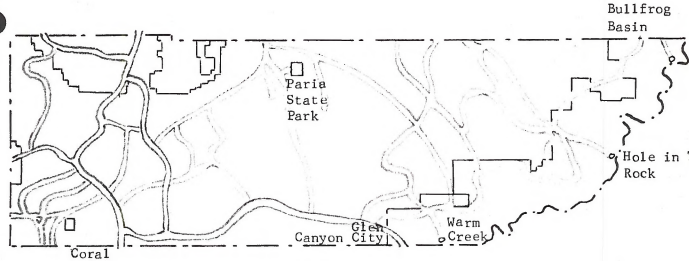


PROPOSED

Source: Population and Economic Base Study, Kane County, Utah
PRA - Planning and Research Associates, 1969

KANE COUNTY RECREATION AND TRANSPORTATION FACILITIES

Washington County, Utah's Dixie, lies at the western edge of America's Golden Circle of Scenic and Recreation areas, and serves as the gateway to Southern Utah's National and State Parks, Monuments and historical sites. (See Illustration 3.) The County is blessed with mild temperatures and provided with an abundance of travelers via Interstate 15 (Highway 91) that arises out of Southern California and constitutes the most vital artery into Southern Utah. In 1960, the Utah State Department of Highways estimated that 2,270 vehicles per day passed their traffic counter at the Utah-Arizona border on Highway 91 (Interstate 15). In 1970, it was projected to have increased to 4,529 vehicles per day, close to doubling the 1960 level. By 1975, this may increase to 6,500 average vehicles per day, or 10,075 vehicles per day during the high season summer months.[28/]

Californians represent the largest single source of out-of-state visitors coming to Utah, and the largest single source of revenue dollars.[29/] In 1965, 36% of total visitors to Utah were from California,

[28/] Based on a 1960-155% of the yearly average for a July day. Utah State Department of Highway.

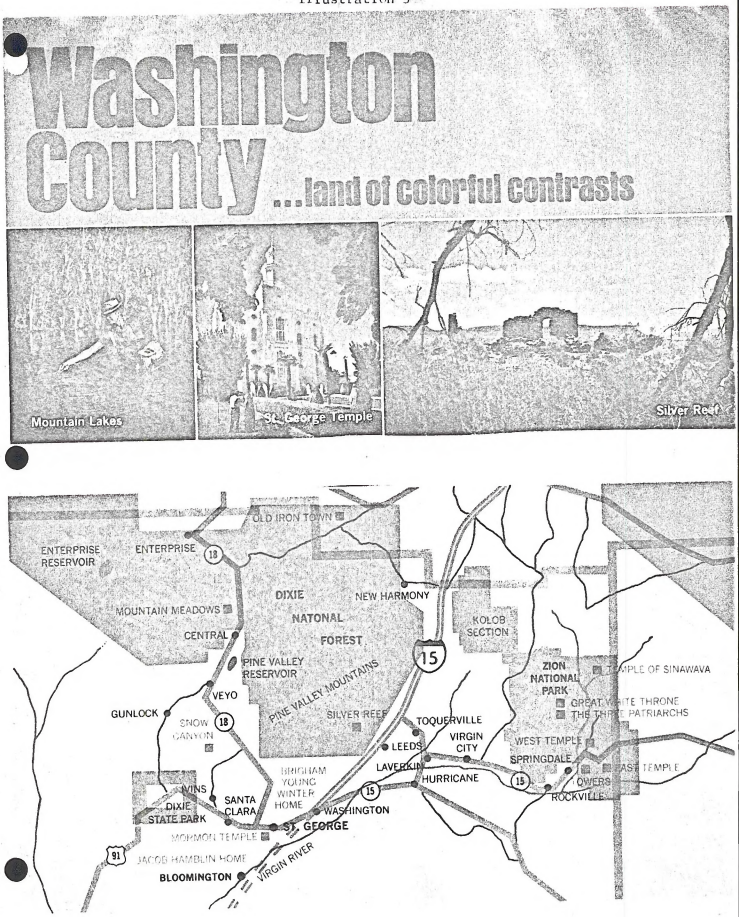
[29/] Recreation in Utah, Profile of the Demand for Outdoor Recreation by Out-of-State Travelers to Utah. J. S. Perry - Univ. of Utah, 1967.

providing the State with 43% of its tourist revenue. These people showed a high preference for four areas - Cedar Breaks, Lake Powell, Capital Reef and Dead Horse Point - all located in Southern Utah.

Forty-two percent of visitors came from Northern, Southern, and midwestern regions of the Nation, providing Utah with 40% of its visitor revenues.[30/] Northern visitors showed a preference for the Great Salt Lake, Salt Lake City, Bryce Canyon, Bonneville Salt Flats and Zion National Park, but were less inclined to visit Lake Powell or Cedar Breaks.

30/ Ibid.

Illustration 3



Midwestern visitors showed a high preference for Dinosaur National Monument and Bingham Copper Mines, but were less interested in Zion National Park, Bryce Canyon and Lake Powell.

Southern visitors showed a preference for Cedar Breaks, and Bonneville Salt Flats. Only 14% of visitors came from adjacent states.[31] Their preference was strong for Flaming Gorge and Capital Reef, less so for Lake Powell and Zion National Park which was next to bottom.

From June 1969 through May 1970 out-of-state visitors traveling by motor vehicles brought $11,625,900 in revenue to Washington County, second only to Salt Lake County, and three times that of Kane County.[32] Transportation, food and lodging industries received 84% of the monies spent by visitors during this period. These industries, studies have shown, will likely benefit most from the rapid growth of tourism for the years ahead.

At this point, it may be advantageous to explore Utah tourism from an economic standpoint by analyzing relationships in income levels to types of accommodations

[31] Ibid.

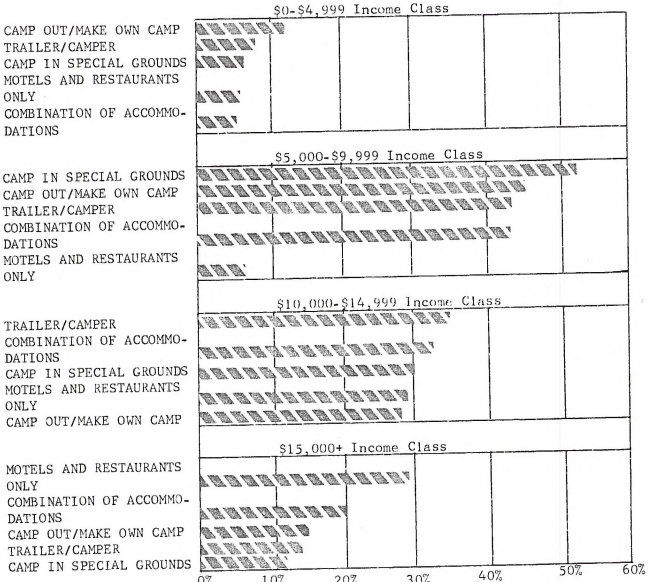
[32] Utah Travel Council.

sought, kinds of recreation preferred, party expenditures, etc., in an attempt to better understand its present and projected impact on the economy within the Golden Circle of Scenic and Recreation Areas.

Studies on recreation in Utah show that out-of-state visitors on vacation trips preferred outdoor accommodations over the motel-hotel type accommodation. Income levels (See Table XXI) had a direct bearing on types of accommodations preferred within the lower income brackets clearly desiring outdoor accommodations. Surprisingly, a preference for outdoor accommodations extended into the $14,000 income level, however, manifested in the more formal trailer-camper types. Analysis between preference and actual use accommodations shows a high correlation, but apparently due to a lack of facilities or change of plans, shifts of preference are reflected from outdoor type accommodations to indoor types. (See Table XXII.)

TABLE XXI

RELATIONSHIP BETWEEN INCOME CLASS AND PREFERENCE IN EACH TYPE OF ACCOMMODATIONS[1/]



Note: Graphs indicate the percentage of preference within each accommodation by income class. They do not indicate the percentage of an income class preferring a type of accommodations. Assuming each income class is a certain percentage of that total survey, comparison of interest level by accommodation by class can be made.

1/ Source: Recreation in Utah, a profile of the demand for outdoor recreation by Out-of-State Travelers in Utah. J. S. Peery et al, Univ. of Utah 1967.

TABLE XXII

PREFERRED ACCOMMODATIONS AND ACTUAL ACCOMMODATIONS

USED BY OUT-OF-STATE VISITORS TO UTAH

Accommodations	Preferred (Percent)	Actual (Percent)
Campout	38	31
Motel, Hotel	33	48
Combination of Accommodations	29	21

Source: Recreation in Utah, a profile of the demand for outdoor recreation by out-of-state travelers to Utah. J. S. Peery et al, Univ. of Utah 1967

Vacationing resident families seem to prefer motel and restaurant accommodations over the outdoor types preferred by out-of-state vacationing visitors. In 1964, 75% of money spent by Utah residents on vacation trips was spent outside the state creating a lower total income for Utah citizens. This amounted to $42 million spent outside the state and only $14 million was spent in the state. 33/

Out-of-state visitors seem to prefer touring related activities the most. Driving for sightseeing, visiting historical sites, and photography account for a major share of recreation activies. See Table XXIII.

33/ Recreation in Utah, a profile of the demand for outdoor recreation by Utah residents. R. C. Richardson et al. Univ. of Utah 1966.

TABLE XXIII

PARTICIPATION IN OUTDOOR RECREATION ACTIVITIES

BY VISITORS COMING TO UTAH

Activity	Percent			
	Business Only	Visitors Passing Through	Business & Pleasure	Vacation
Sightseeing	33	52	71	77
Historical Sites	18	35	56	51
Picnicking	14	17	35	40
Photography	13	30	44	51
Swimming	12	7	22	19
Hiker	7	4	17	25
Camping	4	15	19	39
Boating	4	--	4	5
Waterskiing	3	--	1	2
Horseback Riding	3	2	7	5
Golfing	1	--	4	3

Source: Recreation in Utah, a profile of the demand for outdoor recreation by out-of-state travelers in Utah. J. S. Peery et al. Univ. of Utah 1967.

Table XXIV shows the relationship between type of outdoor recreation activity engated in and type of accommodations used. Forty percent or more of out-of-state visitors that participated in sightseeing, visiting historical sites, photography and golfing utilized motels. Visitors that came to camp, picnic, hike, fish, hunt and waterski predominately preferred outdoor accommodations.

An analysis of average party expenditures in relation to type of outdoor activities that were engaged in showed parties engaged in golfing spent more per trip than parties engaged in other activities. Sightseeing, visiting historical sites, photography were quite low in per trip expenditures while horseback riding, boating, fishing and hunting expenditures

TABLE XXIV

VISITORS ENGAGING IN EACH OUTDOOR ACTIVITY CLASSIFIED BY

PROPORTION USING ELECTED TYPES OF ACCOMODATIONS

		Percent Staying in (with)						
Activity	Total Number	Motel	Campout	Friend or Relative	Hotel	Hotel Motel	Hotel, Motel, Friend	Combination
Sightseeing	1,406	45.5	28.7	6.4	2.5	2.2	3.6	11.1
Historical Sites	939	43.9	26.9	6.0	3.7	2.6	4.0	12.9
Photography	919	41.7	33.0	3.5	3.1	2.6	2.5	13.6
Picnicking	736	25.0	45.1	7.1	1.2	1.0	4.3	16.3
Camping	692	3.8	69.1	2.0	NA	0.1	0.7	24.3
Hiking	434	26.3	45.9	2.2	1.4	2.5	3.0	18.7
Swimming	339	36.6	35.7	7.4	2.9	2.7	2.7	12.0
Hunting	174	10.4	64.9	2.3	1.2	NA	3.4	17.8
Fishing	179	23.5	45.2	9.5	0.6	0.6	7.2	13.4
Horseback Riding	93	36.6	28.0	5.4	1.0	3.2	7.5	18.3
Boating	75	33.3	28.0	4.0	1.3	1.3	5.3	26.7
Golfing	45	40.0	11.2	20.0	4.4	4.4	6.7	13.3
Water Skiing	31	22.6	35.5	12.8	NA	NA	6.5	22.6

NA = Not Available

Source: Recreation in Utah, a profile of the demand for outdoor recreation by out-of-state travelers to Utah. J. S. Peery, et al, Univ. of Utah 1967.

per party per trip were quite high. This may partially be explained by the growing demand for outdoor recreation activities by the middle and high middle income brackets.

The reader should bear in mind that these activities represent common activities engaged in by parties, although they may have engaged in other activities during their stay in Utah. See Table XXV.

TABLE XXV

RELATIONSHIP BETWEEN PARTY EXPENDITURE AND TYPE OF OUTDOOR RECREATION ACTIVITY

Activity	Weighted Average Party Expenditure per Trip
Golfing	$ 255.26
Skiing	239.58
Horseback Riding	229.56
Boating	210.63
Fishing	191.80
Hunting	190.67
Water Skiing	171.05
Hiking	154.67
Swimming	143.63
Picnicking	130.41
Photography	126.06
Historical Sites	121.22
Camping	121.10
Sightseeing	121.07

Source: Recreation in Utah, a profile of the demand for outdoor recreation by out-of-state travelers to Utah. J. S. Peery et al, Univ. of Utah 1967.

TABLE XXVI

1965

YEARLY FAMILY INCOME
(Percent)

Yearly Income	All Visitors Except Skiing
Ten thru $2,000	2
$2,000 to $3,999	3
$4,000 to $5,999	9
$6,000 to $7,999	18
$8,000 to $9,999	18
$10,000 to $14,999	30
Over $15,000	20
	100

Average U.S. Family Income in 1965 - $8,700

Source: Recreation in Utah, a profile of the demand for outdoor recreation by out-of-state travelers to Utah. J. S. Peery et al, Univ. of Utah 1967.

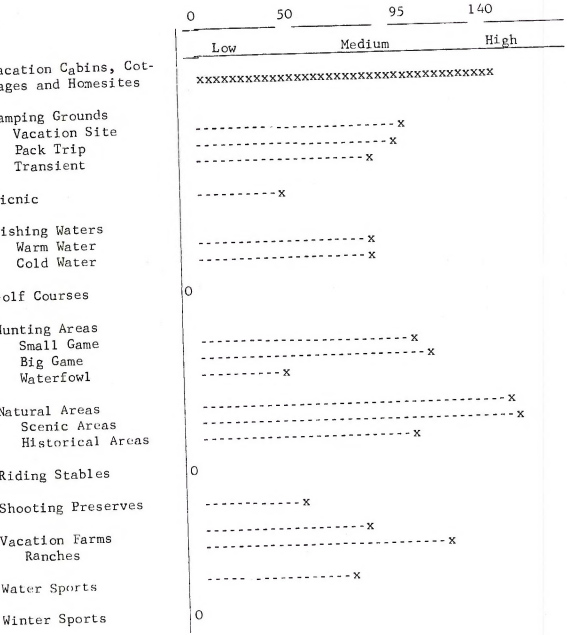
Over the next decade, recreation demand in Washington County will increase only to the extent that facilities are developed or improved to make recreation attractive for visitors. See Table XXVII. To meet this challenge, the County will be forced to respond to new Interstate 15 Highway bypass through St. George, new access roads, the Dixie Reclamation Project, the Gunlock Dam Project and natural and historic sites in its exploitation of its position or gateway to Southern Utah.

Recreation and tourism in the District Statistical Region is covered under the Natural Resource Section. See Page 81.

TABLE XXVII

RECREATION POTENTIAL APPRAISAL

WASHINGTON COUNTY, UTAH



Source: Appraisal of potentials for outdoor recreation developments, Washington Count, Utah. County Technical Action Panel, 1968.

4. Forestry

The economy of Kane County has historically been long dependent on the forestry industry. Saw timber is harvested from National Forest lands located primarily in Garfield and Coconino Counties. In 1970, only 11.7 million board feet was harvested from National Forest lands within the County. Lumber mills located in Panguitch, Escalante, Utah and Fredonia, Arizona process the timber. The number of people employed in these mills vary from 450 during the winter to 550 for the remainder of the year.

The 1966-1968 average yearly sale of juniper posts and Christmas trees from BLM lands amounted to 18,875 juniper posts and 112 pinon pine Christmas tree permits.

TABLE XXVIII

TOTAL FOREST PRODUCTS FROM PUBLIC LANDS - 1970

County	Commercial Timber (MBF)	Juniper Posts (No.)	Christmas Trees	Cordwood	Joshua Trees	Cactii
Kane County						
National Forests	11.7	0	NA	40		
BLM	0	18,875 1/	112 1/	0	NA	NA
Washington County						
National Forests	0	6,460	575	35	0	0
BLM	0	1,436	280	25	78	6
Statistical Region						
National Forests	49-50½	335	1,310	320	0	0
BLM	0	5,925	336	8	1	1

NA = Not Available. Includes both Free Use and Sales.

1/ 1966-68 average figure.

Forestry in Washington County today is insignificant. No merchantable saw timber is cut as was done in the past. About 7,900 cedar posts and 855 Christmas trees are cut each year. A growing demand for Joshua trees and Barrel Cacti is becoming important for landscape purposes. This may constitute a small but growing segment of the forestry product market in the future from State and Public lands.

Timber products harvested on National Forest lands and milled in Fredonia provide the largest single source of revenue in the Statisitcal Region. Forty-nine to fifty million board feet of Ponderosa Pine, White Fire, Douglas Fir, and Engleman Spruce are harvested each year. Gross income from this production amounts to about three-million dollars annually. The Kaibab Lumber Company estimates there are 20-25 years of timber reserves remaining in the North Kaibab Forest.

Based on past patterns, the Kaibab Lumber Company is planning to increase production to 52-53 million board feet annually in the next 4-5 years over the present 45-50 million board feet level.

Colorado City operates a small lumber mill for lumber harvested from the Mt. Trumbull area of the Kaibab National Forest. For the past six of seven years, about one-half million board feet of lumber has been taken annually from this area.

There is no saw timber harvested off BLM lands. A small quantity of Juniper and Christmas trees are harvested each year. See Forest Products Section under Public Land Resources.

Over the next ten years, greater and greater demands will be placed on the lumber industry in this area. As in the past, timber will have to be harvested from National Forest lands located in Garfield and Coconino Counties.

III. Public Land Resources

This section examines the present and projected magnitude of BLM resources, and attempts to measure the economic impact of these resources to initial users and contribution made by each to personal income in the local economy.

Techniques have not been developed to measure all values of public domain resources. For example, there are many aesthetic and open space values such as archaeological, historical, architectural and scenic sites, etc. that cannot be measured under present technology. Other values cannot be measured in traditional economic terms but must be evaluated on non-economic terms. The Agriculture Section expands this subject in depth. Some measurements fit only a specific area, lacking relevancy to broader application or scope in other areas. For example, a 25 sector multiplier model generated for Hoboken, Alaska would have limited applicability to measuring economic activity in Pagosa Springs, Colorado, although it may be the only data available and some similarities are found to exist between the two areas. To rely on multipliers from this area without trade coefficient comparisons may be dangerous and misleading. The same applies to broad income multipliers on a state or regional level, where one tries to custom fit these to localized conditions.

Findings in this section may be useful to the Resource Manager in facilitating sound decision making, until better techniques

are developed and additional data of a more relevant nature becomes available to supplement or compliment that which is reflected.

Three groups are considered in this supplement. BLM, initial users and community impact users. Each of these groups may place different values in a resource which is reflected where data is available.

A. Livestock Forage

1. Monetary Value of Livestock Grazing to BLM

In 1970, at 44¢ per AUM, 212,043 AUM's of forage were sold under Section 3 Permits, that brought approximately $93,299 in grazing fees.

2. Dependence of Permittees on BLM Forage

There are 168 permittees in the District using BLM forage. It is estimated that 14% of the permittees are dependent on BLM for 15% or less of their total livestock feed, 40% of the permittees are dependent on BLM for 16 to 50% of their total livestock feed, while 46% of the permittees obtain 51% or more of their feed from the BLM.

3. Dependence of Livestock Industry on BLM Forage

Almost 36 percent of livestock feed consumed in the Kane and Washington Community Impact Area is obtained from BLM lands on Section 3 Grazing Permits, See Appendix A. Over 76% of livestock feed consumed in the Statistical Region is obtained from BLM Section 3 Grazing Lands.

4. Monetary Value of BLM Forage to Livestock Industry

Based on an estimated current market value of $3.50 per AUM, the 212,043 AUM's of BLM forage sold in 1970 had a monetary value of $742,151 to the livestock industry.

5. Monetary Value of BLM Forage to Local Community

In 1964, the sale of livestock raised on BLM forage created an estimated $182,919 in personal income, or about $1.14 per AUM. The value of agricultural products is not available for a later date.

6. Dependence of Local Community on BLM Forage

In 1964, personal income generated in the District by the sale of livestock raised on BLM forage was 1.7% of the total personal income in the area.

7. Bench Mark Projections

Total livestock feed consumption in the District is projected to increase 15% between 1970 and 1980. Much of this increase is based on intensive management extending over approximately 90% of the area where overuse and watershed problems have occurred. BLM forage production in this period would have to increase from 212,043 to 243,380 AUM's. See Illustration 4.

Demand over the next ten years will most probably exceed this production increase by 10%. This demand is based on projected population increases and present levels of beef consumption.

In Utah, production of cattle and calves has been increasing - in fact about 6% between 1960 and 1965. In Arizona, beef production increased over 27% in the past decade while cattle slaughtered, over 108% in the same period. Most cattle raised on the Arizona Strip is marketed through Utah, however, it would be reasonable to believe that a shift in marketing could be affected based on supply and demand conditions.

Any revolutionary changes in the production, marketing, (or than that mentioned), consumer demand, or foreign tariff changes are not considered and are beyond the scope of this study.

The 39,512 AUM's reflect forage that could have been used, but was deferred for conservation purposes, annual fluctuation of livestock operations, financial and other reasons beyond the control of the licensees. A good 30-50% of these AUM's represent an overage of grazing capacity that could be taken under good management practices. Hence, the AUM's are probably present, but not in keeping with good range management practices to improve range and watershed resources.

B. Recreation

1. Deer Hunting

(a) Dependence of Deer Hunters on BLM Deer Habitat

Based on the 1967-68 hunt data, there was an average of 29,507 deer hunter days spent in the Statistical Region, of which 34% of these hunter days that can be attributed BLM Deer Habitat Range, generating 10,032 average BLM hunter days.

(b) Monetary Value of BLM-Based Deer Hunting to Hunters

A hunter day is worth about $5.00 to a deer hunter in the District.[34/] The monetary value of BLM based hunting to the hunters is an estimated $50,160 (10,032 hunter days X $5.00).

(c) Monetary Value of BLM-Based Deer Hunting to Local Community

The average annual number of non-local hunter days in the District Statistical Region for the years 1967-68 was 28,032 hunter days. (See Appendix B). About 34% of these hunter days or 9531 hunter days may be attributed to BLM lands. If the average non-local hunter spends $10.00 per day, and if each dollar of output demanded creates an additional $.92 in personal income, then BLM based hunting

34/ This is a conservative figure based on the long distances one must travel to hunt the District.

generated about $182,995 to the two community impact areas. This figure means that for each day spent in the field by a non-local hunter, $19.19 in personal income is generated to the local community (182,995 ÷ 9531).

(d) Dependence of Local Communities on BLM-Based Deer Hunting

Total personal income in the two community impact areas for 1968 was $24,912,251. The average annual amount of personal income generated by hunting deer on BLM based lands in the District for the years 1967-68 was approximately 0.7% of this amount.

(e) Bench Mark Projections

Big game hunting license sales in Arizona are expected to increase not more than 10% over present levels during the next decade.

Deer hunting pressure in the District Statistical Region is expected to increase from a level of 2500 hunters to a maximum of 5,000 hunters in 1980.[35/] This would mean a jump using 1967-68 average figures from 29,507 hunter days to 59,014 hunter days by 1980 - a 100% increase.

35/ Source: Levi Packard, State Fish and Game Department.

If the BLM was to provide the same proportion of hunter days in 1980 as it did in 1967-68, 20,065 hunter days would be spent on public dominion lands. It is doubtful that BLM resources can handle this type of pressure without some permanent damage being done to the area. It may be that decreased hunter success levels from increased pressures on deer population will reduce the influx of hunters, or that the development of campgrounds could alleviate the pressures placed on natural resources by concentrating hunters.

2. Other Big Game Hunting

The District provides habitat for antelope and desert big horn sheep hunting, however their numbers and/or habitat are too small to provide hunting that would be of economic significance to the local community. Turkey are hunted in conjunction with deer in the Kaibab National Forest, but again are so few in number that they are of negligible economic value to the community.

3. Upland Game Birds and Small Game Hunting

Upland game birds and small game are hunted in the Statistical Region, but the distance from large metropolitan areas is sufficiently great that hunting pressure is light, limiting the economic impact on the local community

to a negligible figure. Often these game species are hunting in conjunction with deer.

4. General Recreation (Non-hunting Outdoor Recreation Activities)

(a) Present Recreation Use:

The District Statistical Region abounds in spectacular scenery and historical sites for the non-hunter visitor. Principal recreation activities range from sightseeing, camping, hiking, boating, and horseback riding to guided tours and formal talks. The vast majority of these activities center around the Grand Canyon, Glen Canyon Recreation Area, Kaibab National Forest and Pipe Springs National Monument.

Principal recreation activities on BLM lands center around hiking, camping, rockhounding and sightseeing. There are no developed campgrounds on Public Domain lands.

The only area that has received publicized attention is the Paria Primitive Area which drew a 1,000 visitor days in 1970. Black Rock Mountain, covered with Ponderosa Pine, is another special attraction widely known but little used other than by hunters, due to a lack of good access roads.

District recreation use records are limited to hunter day information and eleven traffic counters strategically placed throughout the area. Trend data from these traffic counters is not available. Estimated two-way traffic on a monthly basis taken from 1969 data is shown below:

TABLE XXIX

TRAFFIC COUNTERS

Counter Location-Road	Total Average Vehicle/Month
"Paint the Ponderosa"	418
State Line Highway 64	937
Temple Trail, South of Navajo Trail	65*
Point of Rocks, Clayhole Road	600
Kaibab Indian Boundary-Mt. Trumbull	953

*Low reading due to southbound traffic turning east-west on Navajo Trail

Total Non-hunting outdoor recreation in the District Statistical Region in 1969 was 1,200,476 recreation days.[36/] This included 1,193,476 visitor days spent on National Forest and Park Service lands. BLM lands received only 6,000 visitor days of this total.

(b) Monetary Value of BLM Based Recreation to Users

Based on an estimated market value of $1.00 per visitor day, the 6,000 visitor days on BLM lands in

36/ Some agencies use visits, others visitor days - both are encompassed under Senate Document #97's Recreation Day which are added together and used here.

1969 had a monetary value of $6,000 to recreationists. A market value figure of $1.00 is used as an entrance fee equivalent that a recreationist would be willing to pay if there were no free recreation lands in the area.

(c) Monetary Value of BLM Based Recreation to Local Community

If the average visitor spends $6.23 per day in the local community and if each dollar outlay demanded creates an additional 92¢ in personal income to the community, then District BLM Based Recreation created about $71,770 in the local communities.

(d) Dependence of Recreationist on BLM Lands

It is estimated that about 0.5% of non-hunting outdoor recreation occurs on BLM administered lands within the District Statistical Region.

(e) Benchmark Projections

Appreciable visitor day increases in the District will depend largely on Utah State, National Park and Forest Service outdoor recreation visitor increases and their ability to accommodate these visitors, coupled with development of access roads and recreation facilities on BLM lands to handle a projected overflow due to over-crowded conditions in the above-mentioned areas followed with a demand created by these visitors in the following years. The National Park Service forecasts a 141% increase in visits to the Glen Canyon National Recreation

Areas between 1970 and 1979. Visits to the Grand Canyon and Pipe Springs are expected to increase 42% and 32% respectively over the same period. For the National Park System this represents a total 70% increase in visits to these areas. The North Kaibab National Forest is anticipating a 100% increase in visitor days over the same period. This is not an unreasonable figure for during the peak of the 1970 summer, overcrowding of campgrounds was so critical that they were turning an estimated 1000 visitors away daily. (See Table XXX).

Persons who have used these recreation areas freely in the past may find that reservations are required in future visits. Overcrowding has become such a problem in the Grand Canyon National Park that six campgrounds will use a registration-reservation system at certain critical periods of the holiday season. The Forest Service has not contemplated going to a reservation system, but they conceded that this may be a very possible future consideration.

Outdoor recreation demands may far exceed present expectations on BLM lands if the National economy keeps pace with that of the mid-sixties. With an anticipated spillover of visitors from both State

TABLE XXX

Ten-Year Forecast of Visits to Reporting Areas of the National Park & Forest Service

Area	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Glen Canyon	910.5	1040.7	1179.0	1324.1	1473.7	1625.5	1776.7	1924.2	2064.6	2194.7
Grand Canyon MP[1/]	2219.8	2322.6	2425.4	2528.2	2631.0	2733.8	2836.6	2939.4	3042.2	3145.0
Pipe Springs	28.2	29.2	30.2	31.2	32.2	33.2	34.2	35.2	36.2	37.2
N. Kaibab Forest	341.3	368.7	398.2	430.0	464.4	501.6	541.7	585.0	631.7	682.3

Source: National Park System, Kaibab National Forest Range Office - Fredonia, Arizona

[1/] Both Rims

and National Park and Forest lands, and resultant demand created especially with the implementation of the Virgin Canyon and Black Rock Mountain campsites, and Vermillion Interpretative Site, a 85% increase in visitor days is conservatively projected through 1980. This would bring the visitor days spent in the District up to 11,100 by 1980. This figure was kept conservative due to the general lack of good access roads into the area that will limit visitor day increases.

C. Minerals

Over the last seventy years, many mineral deposits have been located in the District Statistical Region, but few have been in commercial quantities that could be successfully produced. Gypsum, lead, uranium, copper, picture stone, sand and gravel, and even an alleged sample of crude oil have all been located but technological and economic changes will have to occur before most of these are developed successfully.

At present the only mineral of economic value to the District Statistical Region is sand and gravel production, however, the State Selection Program has taken over most sand and gravel producing areas from Public Domain lands.

1. Monetary Value of BLM Sand and Gravel to BLM & Initial Users

Most BLM production has been on a free use basis rather than

from sales. In 1968 200 cubic yards of sand and gravel were sold at 10¢ per cubic yard, bringing $20.00 to the BLM.

2. Dependence of Industry on BLM Sand and Gravel

In 1968, the Arizona Highway Department took approximately 140,186 tons of sand and gravel on a free use permit to surface the Colorado City to Pipe Springs Road, and seal coat the Marble Canyon to Fredonia road. Another 28,000 tons have been committed on a free use permit to surface Interstate 15 Highway from Littlefield to St. George. This represents 73.1% of the sand and gravel produced in 1968 from BLM lands in the District Statistical Region.

Sand and gravel sales play an important part in the local construction industry. However, most of the demand for it is satisfied from production in Kane and Washington Counties. Some sand and gravel is produced principally on a free use basis for local consumption in the Fredonia Area. In 1969 Kaibab Industries contracted for 500 cu. yds. of borrow gravel that brought $30.00 in sales.

3. Monetary Value of BLM Sand and Gravel in Local Community

Sand and gravel production has played an important part in road construction work in both Coconino and Mohave Counties. But determination of a monetary value of this resource to the local community is most difficult and at this writing is not available.

4. Benchmark Projections

Future sand and gravel sales may center around the proposed power and transmission line project tentatively projected to cross the District. Sales may amount to approximately 148,000 cu. yds. or $14,800 at 8¢ per cu. yd. This demand is expected to last through 1980-85.

D. Timber and Other Woodland Products

The economies of Kane County and the District Statistical Region are based largely on Lumber Production. In 1969, approximately 45-50 million board feet of commercial timber were harvested by Kaibab Lumber Industries off the North Kaibab National Forest. Another one-half million board feet were taken off Mt. Trumbull by Colorado City contractors. The principal timber species harvested are Ponderosa Pine, White fir, Douglas fir, and Englemann spruce.

There is no commercial timber harvested on BLM administered lands. One or two small stands of Ponderosa Pine are found within the District, but present plans call for protection of this timber for aesthetic and recreation purposes. Present production of forestry products in the District center around the sale and issuance of free use permits for Juniper posts, firewood, Christmas trees and desert plants. See Table XXXI.

TABLE XXXI

1970 Woodland Products Harvested

	Free Use	Sold	Monetary Value
Juniper Posts	3700	2225	$ 260.00
Christmas Trees	97	239	95.00
Fuel Wood	--	8 Cords	6.00
Cactus	--	1	1.00
Joshua Tree	--	1	5.00

1. Monetary Value of BLM Woodland Products to BLM and Initial Users

Since salable Juniper posts are sold at market value, the monetary value to BLM and initial users are the same. At a market value of 12¢ (10¢ in one sale) per Juniper post, the 2225 posts sold in 1970 had a market value of $260.00. During the same year, 239 Christmas trees were sold at 40¢ each bringing $95.00 to the BLM. The market value to the initial users is estimated to be $5.00 per tree or $1195 for the total. See Table above for other wood products.

2. Dependence of Industry on BLM Wood Products

It is estimated that 91% of the 24,821 Juniper posts sold in the two Community Impact areas in 1970 were harvested from BLM administered lands. In the District Statistical Region, over 90% of Juniper posts sold came from BLM lands. Forty-five percent of Juniper post free use permits come from BLM lands.

Christmas tree sales from BLM lands amounted to approximately 11% of total Christmas tree sales from public land resources, but 100% on a free use basis.

3. Monetary Value of BLM Wood Products to the Local Community

The production of Juniper posts from Public Domain lands contribute very little in monetary value to the local community. More and more steel posts are used today in fence construction therefore possibly creating a limited future for wooden posts.

Christmas tree sales are basically in the same category of limited market value and future. They contribute probably somewhere around 0.04% to total personal income at a $5.00 per tree market value. With more and more artificial trees being used each year, their future is uncertain.

4. Benchmark Projectives

Future demand for cordwood, Juniper posts and Christmas trees is uncertain, but probably will not exceed present demands through 1980. There may be an increased demand for desert flora to be used in landscaping homesites locally, but from an economic standpoint, its impact on the economy will be negligible.

F. Summary

The Arizona Strip District Statistical Region is located north of the Colorado River in northwestern Arizona. The region is rich in natural resources. Economically the region has developed strong economic ties with Kane and Washington Counties, Utah, channelizing most business activities through these areas. For the purpose of this analysis these two counties are designated community impact areas to measure the economic impact of BLM resources in the local economy. Approximately 93% of the land in the District Statistical Region is under Federal ownership, a little over 4% in State land and about 3% private.

Population: The District Statistical Region is very sparsely populated making up only about 0.1% of the states population. The present population is only 1800, an 81% increase in population is projected through 1980 bringing the population to 3250 people.

Kane County's population declined over 13% over the last decade, while Washington County grew 33% in population over the same period. Without industrial development, Kane County may realize another 5% decrease in population over the next 10 year period. Washington County is expected to grow at least 10% over the next decade, however with the present level of business activity it may be greater.

Income: In 1968, the total personal income in Washington County was more than five times the personal income of Kane County.

Projected Demand - 1980

Livestock Forage	243,850 AUMs
Deer Hunter Days	20,065
General Recreation Visitor Days (non-hunting)	11,100
Sand and Gravel	(Reserved)
Juniper Posts	(Reserved)

Dependence of BLM Permittees on BLM Forage:

Total number of Section 3 permittees	168
Dependent on BLM for 15% or less of their livestock feed	14%
Dependent on BLM for 16-50% of their livestock feed	40%
Dependent on BLM for 51% or more of their livestock feed	46%

Monetary Value to Initial Users:

Livestock Forage	$742,151
Deer Hunting	50,160
General Recreation (non-hunting)	6,000
Sand and Gravel	20
Juniper Posts	260
Surface Water	(Reserved)
Ground Water	(Reserved)

Dependence of Initial Users on BLM Resources

Livestock Forage	36%
Deer Hunting	34%
General Recreation (non-hunting)	0.5%
Sand and Gravel	73.1%
Juniper Posts	90.4%
Surface Water	(Reserved)
Ground Water	(Reserved)

Monetary Value to Local Communities:

Livestock Forage	$310,962
Deer Hunting	182,995
General Recreation (non-hunting)	71,770
(Value of other resources unknown)	

Dependence of Local Communities on BLM Resources:

Livestock Forage		1.7%
Deer Hunting	approximately	0.7%

G. Conclusion

This analysis has explored the economy of two Utah counties, designated as Community Impact Areas, that have provided an economic medium for most business transactions occuring in the Arizona Strip District Statistical Region. These two counties, Kane and Washington Counties, Utah, are both basically rural in character and have developed around the rich resources of the region. Neither county possesses the buying power index of a more industrialized community. Both counties are basically closed-communities catering primarily to the faithful of the Church of Jesus Christ of Latter Day Saints. This poses a problem to future development perhaps focusing most attention to export oriented industrial growth of a service nature, particularly if the Kaiparowits Coal Project does not materialize.

The dependency of the local community on BLM resources is very small under present market conditions and barring any technological or economic changes in mining, it will probably remain very small in the future. Perhaps the greatest value of BLM based resources as a total is in the nature of their geographical location which cannot be explained in traditional economic terms. The partial circumnavigation of this region by the Colorado River and the lack of good access roads from the north have basically isolated the region from the rest of the world. It has caused the region to remain pristine, unspoiled, unpolluted, offering clean air and open spaces of a most satisfying nature and experience even to the most novice traveler. It is an area that defies economic explanation in this day of environmental concern.

Illustration No. 4

DISTRICT SUMMARY OF RESOURCE PRODUCTION, CONSUMPTION AND NEEDS: PRESENT AND PROJECTED

Item	Livestock Feed 1970 (AUMs)		Deer Hunting (Aug 1967-68) (Hunter Days)		General Recreation (1969) (Visitor Days)		Sand & Gravel (1968) (Cubic Yards)		Woodland Products (1970) (Juniper Posts)[9]	
	Total	BLM	Total	BLM	Total	BLM	Total	BLM	Total	BLM
Present Situation										
Production:	Unknown	212,043	29,507	10,032[5]	1,200,476	6,000	230,000	168,186	6,260	5,925
Consumption:	248,798[1]	212,043	29,507	10,032	1,200,476	6,000	230,000	168,186	6,260	5,925
Needs[2]	- - - -	-39,512								
Benchmark Projections to 1980[3]										
Consumption:	286,118[4]	243,850[4]	59,014[6]	20,065[6]	6,059,200[7]	11,100	148,000	Unknown[8]		Unknown
Needs	(+)	(+)	(+)	(+)	(+)		(+)			

1/ August 1963-67.

2/ A plus (+) indicates excess demand, and minus (-) indicates excess supply. A (+) indicates that demand for BLM resources will exceed expected production; a (-) indicates that BLM resource production will exceed projected demand.

3/ Projected total consumption is the total demand expected in 1980. Projected consumption shown in the BLM column is the quantity of resources that would have to be produced in 1980 if the BLM were to produce the same proportion it did in 1970.

4/ Benchmark projection includes 15% increase.

5/ BLM land makes up 51% of District Statistical Region; an estimated 34% of the deer cover and feed is produced on BLM lands.

Illustration No. 4 Footnotes (Cont'd.)

6/ Benchmark projections include 100% increase.

7/ This figure is high due to Utah's portion of Glen Canyon Natural Resource Area projected visits are shown, as is the total Grand Canyon.

8/ Unknown due to State Selections.

9/ Free use = 3800 Total, 3700 BLM, remaining sales.

Illustration No. 5

DISTRICT SUMMARY OF UNIT VALUES OF PUBLIC LAND RESOURCES TO BLM, INITIAL USERS, AND LOCAL COMMUNITIES

	Estimated Value of Product or Use Per Unit				
	Livestock Feed AUM	Deer Hunting (Hunter Day)	General Recreation (Visitor Days)	Sand and Gravel (Cu.Yds.)	Woodland Products (Posts)
Monetary Value To					
1. BLM[1/]	$0.44	$ 0			
2. Initial Users[2/]	$3.50	$5.00	$1.00	$0.10	$0.12(10)
3. Local Economics[3/]	$1.14	$19.19	$6.23[4/]	$0.10	$0.12(10)
4. National Economy					
Non-Monetary Value To[5/]					
1. Initial Users:	5	5	5	3	3
2. Local Communities:	3	5	5	1	1
3. Major Interest Groups(Gen'l)	5	5	5	4	4
A. _____					
B. _____					
C. _____					
D. _____					

1/ Grazing Fee not necessarily the market value.

2/ Estimated 1970 market value.

3/ Based on 1964 livestock numbers and income-See Appendix A for computations.

4/ 1965 Utah Recreation figure based on average out-of-state-expenditures per person per trip of $33. divided by 5.3 days,--The average number of days spent in Utah by non-skier visitors.

5/ A 10 point rating system is used in this example 5-high 4-medium 3-medium 2-mediumlow, and 1-low. Values can either be positive or negative and should be assigned by persons intimately familiar with public attitudes and opinions.

Illustration No. 6

MONETARY VALUES OF PUBLIC LAND RESOURCES TO BLM, INITIAL USERS, AND LOCAL COMMUNITIES

Type and Recipient	Estimated Value of Product or Use(Dollars) Livestock Feed	Deer Hunting	General Recreation	Sand & Gravel	Wood Products
Monetary Value To:					
1. BLM[1/]	$ 93,299	0		$20.00	$260
2. Initial Users[1/]	$742,151	$50,160	$6,000	$20.00	$260
3. Local Economy	$310,962[2/]	$182,995[3/]	$71,770[4/]	Unknown	Unknown

1/ Resource Quantity(Illustration 4) times the Unit value(Illustration 5).

2/ This constitutes personal income created in local area by sale of livestock raised on BLM forage. It includes personal income from livestock sector attributable to BLM lands in addition to dollars generated by this income through sales and services by merchants to livestock operators., who in turn buy goods and services from other residents with some of this income, hence a multiplier effect is created.

3/ This constitutes personal income created by the sale of goods and services to non-local hunters. It includes the personal income earned by merchants by the sale of sales & services to hunters, and dollars generated by other residents who sold goods & service to these merchants. In effect, it reflects the original dollars spent and the resulting dollars created by this money. See Appendix B for computations.

4/ Based on $37,380 income earned through the sale of lodging and services by merchants and the dollars generated by other residents through the sale of goods & services to these merchants. A 1.92 income multiplier is used. See Recreation(Hunting) section and Appendix B.

DEPENDENCE OF INDUSTRIES/INITIAL USERS AND LOCAL COMMUNITIES ON BLM RESOURCES

Estimated Dependency (Percent of Income)

Dependent Interest Groups	Livestock Feed	Deer Hunting	General Recreation	Sand & Gravel	Wood Products
Industries/ Initial Users	36%[1/]	34%	0.5%	73.1%[4/]	90.4%[4/]
Local Community	1.7%[2/]	0.7%[3/]	0.3%[3/]	Unknown	91%[4/]

1/ See Appendix A, Item 3.

2/ See Appendix A, Item 13.

3/ Based on 1968 Total Personal Income Figures.

4/ See Narrative for BLM Resource dependency. As a percent of total income, these two sectors contribute little to total personal income.

APPENDIX A

Monetary Value of BLM Forage to Local Communities and

Dependence of Industry and Community on BLM Forage

1.	Total livestock feed requirements (AUM's) [1]	=	$ 765,782
2.	Licensed grazing on BLM lands (AUM's)	=	273,916
3.	Dependence of livestock industry on BLM forage (2 ÷ 1)	=	35.8%
4.	Value of livestock products sold in 1964 [2]	=	$ 2,065,074
5.	Value of all agricultural products sold in 1964 [3]	=	$ 4,427,241
6.	Value of livestock products as percentage of all agricultural products (4 ÷ 5)	=	46.6%
7.	Personal income in agricultural sectors in 1964 [4]	=	$ 1,096,455
8.	Estimated personal income in livestock sectors, 1964 (6x7)	=	$ 510,948
9.	Personal income in livestock sector attributable to BLM land (3x8)	=	$ 182,919
10.	Income multiplier for livestock sector in Kane and Washington Community Impact Areas [5]	=	1.70
11.	Monetary value of BLM forage to local community (9x10)	=	$ 310,962
12.	Total personal income in Kane and Washington Community Impact Areas in 1964 [6]	=	$ 18,365,040
13.	Economic dependence of communities on BLM Forage (11 ÷ 12)	=	1.7%
14.	Personal income created in livestock sector per BLM AUM (9 ÷ 2)	=	$ 0.67
15.	Personal income created in local community per BLM AUM (11 ÷ 2)	=	$ 1.14

1/ U.S. Census of Agriculture 1964. Arizona State Office Figures for District Statistical Region Figures.

2/ U.S. Census of Agriculture.

3/ Ibid.

4/ J. Whitney Hanks, Personal Income in Utah Counties.

5/ A derived income multiplier. This figure was determined by extrapolation of livestock production data at the state and regional levels based on certain assumptions. It was assumed that livestock production at state and regional levels is basically similar to that of local areas, each area requiring similar inputs per dollar output. It was further assumed that state and regional levels are more complex, industries are more interrelated, and there is a higher degree of self-sufficiency causing a greater economic impact with initial changes in output. Hence, multipliers in these areas are generally larger and require a weighted adjustment to more localized areas. These figures were then averaged with and compared to upper Main Stem, San Juan and Green River Sub-Basin multipliers due to the fact that trade coefficients are thought to compare closely with the two community impact areas then adjustments were made as required. The range livestock income multiplier for these sub-basins is 1.74. The reader is cautioned that data derived from use of this multiplier should be used as a general guide only until more specific data becomes available.

6/ Utah Department of Employment Security - Annual Report 1969.

Appendix B

MONETARY VALUE OF BLM BASED DEER HUNTING TO LOCAL COMMUNITY

Year	Game Mgmt. Unit	Entire Game Management Unit: Number of Hunter Days[1]	Entire Game Management Unit: Percent of Hunter Days Spent by Non-local Hunters[2]	Entire Game Management Unit: Number of Hunter Days spent by Non-local Hunters (1X2)	Percent of Habitat in District Statistical Region	Number of Non-local Hunter Days in District Statistical Region (3X4)
1967	N. Kaibab	22,777	95	21,638	100	21,638
	12B	10,501	95	9,976	100	9,976
	13	7,732	95	7,345	100	7,345
		41,010				Total: 38,959
1968	N. Kaibab	5,324	95	5,058	100	5,058
	12B	2,057	95	1,954	100	1,954
	13	10,623	95	10,092	100	10,092
		18,004				Total: 17,104

Annual average number of non-local hunter days in the District Statistical Region 1967-68 Total: 28,032

Times percent of deer habitat on BLM administered lands (34% of Statistical Region)

= number of non-local deer hunter days attributable to BLM lands = 9,531

Times average daily local expenditure of non-local hunters ($10,00) [3]

= Average annual local expenditures of non-local hunters attributed to BLM lands = $95,310

Times income multiplier for hunting expenditures within District (1.92)[4]

= Monetary value of BLM-based deer hunting. = $182.995

Appendix B Footnotes

1/ Arizona Game Management Data Summary 1968-69

2/ Statistical Region including Page, Arizona

3/ Based on estimated daily hunter expenditures in area. About 95% of hunters coming into area are self-contained. Based on a 5-day hunt, party of 2-4, they spend not more than 2 nights in a motel, 2-4 mieals, buy some perishable groceries, and 25 gallons of gasoline per hunter.

4/ A derived income multiplier - See Appendix A - Footnote 5 for Methodology - Sub-basin income multiplier equals 200-203.